

Comprehensive Long-Term Environmental Action Navy (CLEAN) II
Contract No. N62474-94-D-7609
Contract Task Order No. 0289

Prepared for

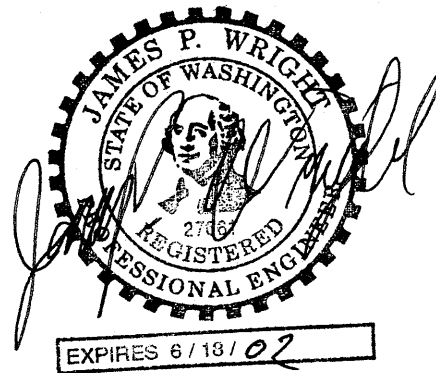
DEPARTMENT OF THE NAVY
Lou Ocampo, Remedial Project Manager
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Southwest Division, BRAC Operations
San Diego, California

Final
Remedial Design,
Specifications, and Drawings
Removal of Contaminated Surface Soil at IR02
Fleet and Industrial Supply Center Oakland
Alameda Facility/Alameda Annex, Alameda, California

DSN.0289.17050
May 14, 2001

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DS.0289.17050

INTRODUCTION

On May 27, 1999, Tetra Tech EM Inc. (TtEMI), formerly known as PRC Environmental Management, Inc. (PRC), received Contract Task Order No. 0289 under the Comprehensive Long-term Environmental Action Navy (CLEAN) Contract N62474-D-7609. The contract task order was received from Naval Facilities Engineering Command, Engineering Field Activity West to prepare this remedial design to address polychlorinated biphenyl- (PCB) and cadmium-contaminated surface soil at Installation Restoration Site 02 (IR02) at Alameda Facility/Alameda Annex. The soil contamination was identified during the Alameda Facility/Alameda Annex remedial investigation (RI) (PRC 1996a), and remedial alternatives were evaluated in the feasibility study (FS) for soil at IR02 (TtEMI 1999).

Alameda Facility/Alameda Annex occupies approximately 143 acres and is located miles east of the former Naval Air Station Alameda, along the southern shore of Oakland Inner Harbor in Alameda, California (Drawing T1).

IR02 occupies approximately 10.65 acres of Alameda Facility/Alameda Annex and is located in the south-central portion of the facility (Drawing T1). The Defense Reutilization and Marketing Office (DRMO) operated a screening lot and scrap yard at IR02 until 1998. The DRMO is responsible for the sorting, resale, and/or proper disposal of property declared excess by the Department of Defense. The surplus equipment that was transferred to IR02 for processing may have contained fuel, oil, coolants, and other liquids that may have leaked onto the exposed surface soil. IR02 is essentially level, mostly unpaved, and completely enclosed by a chain-link, cyclone fence. The western portion of IR02 was used as a screening lot and for temporary equipment storage. The eastern portion of IR02 was used as a scrap yard and for temporary storage of discarded autos, stockpiled scrap metal, and surplus equipment.

As a result of the evaluation of the remedial alternatives evaluated in the FS (TtEMI 1999), the alternative selected is excavation and off-site disposal in an appropriate landfill. Data from the RI are summarized and mapped in Drawing C1. Site maps are based on a site topographic survey completed in June 1999.

BASIS OF DESIGN (ACTION LEVELS AND SOIL TO BE REMOVED)

IR02 is a 10.65-acre site that comprises the former screening lot and storage yard. The DRMO accumulated unneeded equipment at IR02 for disposal or resale. The site has a maximum variation in elevation of approximately 4 feet and is mostly unpaved except for various patches of asphalt and concrete pavement. An abandoned railroad track and siding runs along part of the south border. A portion of these tracks within the fenced area (to be identified by further sampling under this project) is to be removed to excavate contaminated soil. There are two remaining structures, a small wood and concrete building as well as a large steel structure that originally served as an airplane hangar. Neither of these buildings will be affected by this project. The site's storm sewer system, which includes several catch basins, will be left in place to provide drainage off the site. A sanitary sewer system and other potential buried and aboveground utilities also remain at the site.

PCB and cadmium contamination, mostly confined to the top few inches of soil, was discovered during the RI. A possible source of this contamination is leaks from PCB-containing electrical equipment potentially stored at various locations at the site in the past. It is believed that such contamination may have spread about unpaved areas of the site by surface erosion or as a result of redeposition by vehicle tires. There was a small, isolated area of lead-contaminated surface soil, a small area of higher PCB contamination at the surface, and one area with PCB contamination at a depth of several feet (where there had been an underground sump), but soil has been removed from each of these areas in previous removal actions (PRC 1996b; TtEMI 1998).

Currently, PCB-contaminated soil is known to remain as indicated mainly by soil samples collected in the surface soil. The highest PCB concentrations were detected in samples collected from the top one inch of soil. Soil samples contained PCB concentrations as high as 43 milligrams per kilogram (mg/kg), and cadmium concentrations as high as 86 mg/kg. Since the locations of the original contaminant sources are not known, PCB and cadmium contamination could exist at other areas of the site where no samples have been collected from the top one-inch of soil. Therefore, this remedial action will begin with additional sampling to determine the location of all significant areas of contamination that may exist.

Cadmium contamination detected at the site clearly exceeded background concentrations, with a 95 percent upper confidence level of the true value of the mean (UCL95) of 14.3 mg/kg and a

maximum site-wide concentration of 86.4 mg/kg. The residential cleanup level for cadmium is 12 mg/kg, as derived in the FS. The UCL95 was only slightly above the 12 mg/kg cleanup level. The industrial cleanup level derived in the FS for cadmium is 450 mg/kg, which is well above levels found at the site.

The residential cleanup level selected for PCBs is 1 mg/kg, based on U.S. Environmental Protection Agency (EPA) guidance (EPA 1990). The industrial cleanup level is 10 mg/kg based on the Toxic Substances Control Act regulations found in Title 40 of the Code of Federal Regulations, Part 761.

For the purpose of estimating the potential risk associated with exposure to surface soils, the average concentration of PCBs remaining within the surface soils at the site was assumed to be 7.27 mg/kg in the FS (TtEMI 1999). This value was found by calculating the sum of the UCL95 for the concentration of all three isomers of PCBs (Aroclor 1016, 1254, and 1260) detected in all 59 surface soil samples collected at the site. The most highly contaminated surface soil samples included a set of 10 samples collected from the sediment within several shallow depressions across the site. Water collects in the depressions during rain events. Eight of the 10 samples were contaminated with PCBs. Seven of the samples exceeded the residential cleanup level of 1 mg/kg. Two of these samples (both on the industrial portion of the site) exceed the industrial cleanup standard of 10 mg/kg PCBs. Because the contaminated samples are far apart, and do not appear to be related, it is assumed that PCBs may contaminate other areas of the surface soil at the site, and the removal action will therefore require additional sampling to locate any areas where such contamination may exist. Because a few of the surface sediment samples exceeded the cadmium residential cleanup level of 12 mg/kg, soil will be sampled and remediated accordingly for exceedences of the cadmium cleanup level within the residential side of the site. The volume of soil to be excavated was estimated in the FS to be a bank volume of 664 cubic yards; however, the actual amount of soil requiring remediation will depend on the results of additional sampling.

SUMMARY OF IMPORTANT DESIGN FEATURES

Soil contamination is currently assumed to exist within the top 6 inches of soil, possibly in several locations across the entire site, except where buildings and pavement exist. The railroad tracks will be removed within any grid where soil contamination is found to facilitate the excavation of soil underneath. The following describes the key features of the remedial design:

1. A statistically based sampling scheme will be used to collect investigative samples of exposed surface soil in the area as shown in Drawing C2. The samples will be analyzed for PCBs and Cadmium. The area will only be declared clean when surface soil within contaminated grids (those grid squares in which the investigative sample exceeds the cleanup standard for PCBs or cadmium) has been removed, and confirmation samples show that no more contamination remains at the boundaries of the excavation. Because the contamination is limited to the surface, no investigative samples will be collected within or under existing buildings, concrete pads, or paved areas. Where one of these existing buildings, concrete pads, or paved areas exists within an area of contaminated surface soil, soil excavation will stop at the edge of the existing buildings, concrete pads, or paved areas, and a confirmation sample will be collected from the soil immediately under the pavement to demonstrate that contamination does not extend beneath it.
2. During the investigative sampling phase, samples for polynuclear aromatic hydrocarbons will be collected within 40 of the grid squares on the eastern, industrial side of the site. The results of these samples will be used for future environmental risk management decisions, and will not impact soil removal under this project.
3. The surface of contaminated areas will be excavated to an initial depth of 6-inches. If confirmation samples collected within the excavated area show that the soil still exceeds the cleanup levels, soil will continue to be excavated in 6-inch layers until confirmation samples show that the cleanup levels are no longer exceeded. The quantity of soil removed will be measured by volume.
4. Excavated soil will be transported for off-site disposal upon excavation. Some soil may be stockpiled prior to shipping.
5. After all contaminated soil has been removed, the site will be brought up to approximately original grade with backfill.

LIST OF SPECIFICATIONS AND OTHER DESIGN DOCUMENTS

| List of Specifications | | | |
|--|---------|---|----------------------------|
| Division | Section | Title | First Submittal to Include |
| 00 Documents | 00102 | List of Drawings | 35% |
| 01 General Requirements | 01110 | Summary of Work | 35% |
| | 01330 | Submittal Procedures | 70% |
| | 01450 | Quality Control | 70% |
| | 01500 | Temporary Facilities and Controls | 70% |
| | 01575 | Temporary Environmental Controls | 70% |
| | 01770 | Closeout Procedures | 70% |
| 02 Site Work | 02315 | Excavation and Fill | 35% |
| Other Design Documents | | | |
| Title | | Purpose | First Submittal to Include |
| Opinion of Probable Construction Cost | | Provide estimate of construction cost suitable for Navy evaluation of bids | 70% |
| Field Sampling Plan/Quality Assurance Project Plan | | Provide instructions for collection and analysis of soil samples used to verify attainment of cleanup | 70% |

REFERENCES

- PRC Environmental Management, Inc. (PRC). 1996a. "Fleet and Industrial Supply Center, Oakland Alameda Facility/Alameda Annex Site Alameda, California, Final Remedial Investigation Report." January.
- PRC. 1996b. "Removal Action Implementation Report for Removal of PCB and Lead Contaminated Soils, Screening Lot and Scrapyard Area. Internal Draft." March.
- Tetra Tech EM Inc. (TtEMI). 1998. "Draft On-Scene Coordinator Report, Removal Action, IR02 Screening Lot and Scrapyard Area, Railroad Sump, Fleet and Industrial Supply Center, Oakland Alameda Facility/Alameda Annex Site Alameda, California." June 26.
- TtEMI. 1999. "Fleet and Industrial Supply Center, Oakland Alameda Facility/Alameda Annex Site Alameda, California, Final Feasibility Study for Soil at SWMU 1." January 22.
- U. S. Environmental Protection Agency. 1990. "Guidance on Remedial Actions for Superfund Sites with PCB Contamination." EPA/540/G-90/007. August.

**SECTION 00102
LIST OF DRAWINGS**

1.1 SUMMARY

This document lists the drawings for the project pursuant to contract clause "DFARS 252.236-7001, Contract Drawings, Maps and Specifications."

1.2 CONTRACT DRAWINGS

Contract drawings are as follows:

| Drawing No. | Revision No. | NAVFAC DWG No. | Title |
|--------------------|---------------------|-----------------------|--|
| T1 | | | Vicinity Map, Site Location Map, Sheet Index |
| C1 | | | Existing Site Plan |
| C2 | | | Excavation Plan |

-- End of Document --

SECTION 01110 SUMMARY OF WORK

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

1.1.1 Project Description

This work includes systematic grid sampling of surface soil and removal of all surface soil, and railroad tracks, within the grids found to be contaminated. The work is being performed as a remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The contaminants of concern are the PCB isomers Aroclor 1016, Aroclor 1254, Aroclor 1260, and cadmium (Cd). Known concentrations of the contaminants are shown on drawing C1. The soil is to be removed within each contaminated grid to the depth of 6 inches; with additional soil removal if confirmation sampling shows contamination still exists. The work includes the following:

- Sampling soil according to a systematic grid and analyzing for PCBs, Cd, and PAH as described in the Field Sampling Plan/Quality Assurance Project Plan
- Excavation of soil to a depth of 6 inches within grids where PCBs or Cd exceed either cleanup standard
- Stockpiling of excavated soil as needed to provide a constant source for loading trucks
- Sample collection and analysis of soil as needed within excavation areas to confirm attainment of cleanup standard
- Excavation of additional contaminated soil as determined by sampling
- Shipment and disposal of soil at appropriate off-site landfill
- Backfilling of excavated areas to match existing grade to maintain current runoff regime, unless alterations are required to control erosion
- Decontamination of any construction or transportation equipment before leaving the site

1.1.2 Location

The work shall be located at the Fleet and Industrial Supply Center Oakland, Alameda Facility/Alameda Annex, in Alameda California, in the area known as Installation Restoration site 02 (IR02) as shown on drawing T1. The exact location will be shown by the Contracting Officer.

1.2 LOCATION OF UNDERGROUND FACILITIES

Obtain digging permits prior to start of excavation by contacting the Contracting Officer at least 15 calendar days in advance.

Unless directed otherwise by the contracting officer, scan the grid squares designated in Drawing C2 as requiring PAH samples to be collected at a depth of 4 feet, with electromagnetic or sonic equipment, and mark the surface of the ground where existing underground utilities are discovered. Verify the elevations of existing underground piping, utilities, and any type of underground obstruction not indicated or specified to be removed but indicated or discovered during scanning in locations to be sampled for PAHs at a depth of 4 feet.

1.2.1 Notification Prior to Excavation

Notify the Contracting Officer at least 48 hours prior to starting excavation.

-- End of Section --

SECTION 01330 SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Government-Furnished Information

Submittal register will be delivered to the contractor, by contracting officer [on 3 1/2 inch disk]. Register will have the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD No. and type, e.g. SD-04 Drawings) required in each specification section.

Column (e): Lists one principal paragraph in specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.

Column (f): Indicate approving authority for each submittal. A "G" indicates approval by contracting officer; a blank indicates approval by QC manager.

1.2 DEFINITIONS

1.2.1 Submittal

Shop drawings, product data, samples, and administrative submittals presented for review and approval. Contract Clauses "FAR 52.236-5, Material and Workmanship," paragraph (b) and "FAR 52.236-21, Specifications and Drawings for Construction," paragraphs (d), (e), and (f) apply to all "submittals."

1.2.2 Types of Submittals

All submittals are classified as indicated in paragraph "Submittal Descriptions (SD)." Submittals also are grouped as follows:

- a. Shop drawings: As used in this section, drawings, schedules, diagrams, and other data prepared specifically for this contract, by contractor or through contractor by way of subcontractor, manufacturer, supplier, distributor, or other lower tier contractor, to illustrate portion of work.
- b. Product data: Preprinted material such as illustrations, standard schedules, performance charts, instructions, brochures, diagrams, manufacturer's descriptive literature, catalog data, and other data to illustrate portion of work, but not prepared exclusively for this contract.
- c. Samples: Physical examples of products, materials, equipment, assemblies, or workmanship that are physically identical to portion of work, illustrating portion of work or establishing standards for evaluating appearance of finished work or both.
- d. Administrative submittals: Data presented for reviews and approval to ensure that administrative requirements of project are adequately met but not to ensure directly that work is in accordance with design concept and in compliance with contract documents.

1.2.3 Submittal Descriptions (SD)

SD-01 Preconstruction Submittals

- Certificates of insurance
- Surety bonds
- List of proposed subcontractors
- List of proposed products
- Construction Progress Schedule
- Submittal schedule
- Schedule of values
- Health and safety plan
- Work plan
- Quality control plan
- Environmental protection plan

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the contractor for integrating the product or system into the project.

Drawings prepared by or for the contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards by which the ensuring work can be judged.

Includes assemblies or portions of assemblies, which are to be incorporated into the project and those, which will be removed at conclusion of the work.

SD-05 Design Data

Calculations, mix designs, analyses or other data pertaining to a part of work.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified

requirements. (Testing must have been within three years of date of contract award for the project.)

Report which includes findings of a test required to be performed by the contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports

Daily checklists

Final acceptance test and operational test procedure

SD-07 Certificates

Statements signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.

SD-09 Manufacturer's Field Reports

Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.

Factory test reports.

SD-10 Operation and Maintenance Data

Data intended to be incorporated in operations and maintenance manuals.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

As-built drawings

Special warranties

Posted operating instructions

Training plan

SD-12 Records

Documentation maintained at site in 3-ring binder.

1.2.4 Approving Authority

Person authorized to approve submittal.

1.2.5 Work

As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce construction and materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.3 SUBMITTALS

Submit the following in accordance with the requirements of this section.

SD-11 Closeout Submittals

Submittal register; G

1.4 USE OF SUBMITTAL REGISTER

Prepare and maintain submittal register, as the work progresses. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by government; retain data which is output in columns (a), (g), (h), and (i) as approved. Government will maintain separate, parallel submittal register.

1.4.1 Submittal Register

Submit submittal register. Submit with quality control plan and project schedule required by Section 01450, "Quality Control". Do not change data in columns (c), (d), (e), and (f) as delivered by the government. Verify that all submittals required for project are listed and add missing submittals. Complete the following on the register [database]:

Column (g) Contractor Submit Date: Scheduled date for approving authority to receive submittals.

Column (h) Contractor Approval Date: Date contractor needs approval of submittal.

1.4.2 Contractor Use of Submittal Register

Update the following fields in the government-furnished submittal register.

Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.

Column (j) Action Code as described in Section 1.4.4.

Column (k): Date of action used to record contractor's review when forwarding submittals to QC.

Column (l) List date of submittal transmission.

Column (q) List date approval received.

1.4.3 Approving Authority Use of Government Submittal Register

Update the following fields.

Column (l) List date of submittal receipt.

Column (m) through (p) as desired.

Column (q) List date returned to contractor.

1.4.4 Contractor Action Code and Action Code

Entries used will be as follows (others may be prescribed by Transmittal Form):

NR - Not Received

AN - Approved as noted

A - Approved

RR - Disapproved, Revise, and Resubmit

1.4.5 Copies Delivered to the Government

Deliver one copy of submittal register updated by contractor to government with each invoice request.

1.5 PROCEDURES FOR SUBMITTALS

1.5.1 Reviewing, Certifying, Approving Authority

QC organization shall be responsible for reviewing and certifying that submittals are in compliance with contract requirements. Approving authority on submittals is QC manager unless otherwise specified for specific submittal. At each "Submittal" paragraph in individual specification sections, a notation "G," following a submittal item, indicates contracting officer is approving authority for that submittal item.

1.5.2 Constraints

- a. Submittals listed or specified in this contract shall conform to revisions of this section, unless explicitly stated otherwise.
- b. Submittals shall be complete for each definable feature of work; components of definable feature interrelated as a system shall be submitted at same time.
- c. When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, submittal will be returned without review.
- d. Approval of a separate material, product, or component does not imply approval of assembly in which item functions.

1.5.3 Scheduling

- a. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential requirements to resubmit.
- b. Except as specified otherwise, allow review period, beginning with receipt by approving authority, that includes at least 15 working days for submittals for QC manager approval and 20 working days for submittals for contracting officer approval. Period of review for

submittals with contracting officer approval begins when Government receives submittal from QC organization. Period of review for each resubmittal is the same as for initial submittal.

- c. For submittals requiring review by fire protection engineer, allow review period, beginning when government receives submittal from QC organization, of 20 working days for return of submittal to the contractor. Period of review for each resubmittal is the same as for initial submittal.

1.5.4 Variations

Variations from contract requirements require Government approval pursuant to contract Clause entitled "FAR 52.236-21, Specifications and Drawings for Construction" and will be considered where advantageous to government.

1.5.4.1 Considering Variations

Discussion with contracting officer prior to submission, will help ensure functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation, which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

1.5.4.2 Proposing Variations

When proposing variation, deliver written request to the contracting officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to government. If lower cost is a benefit, also include an estimate of the cost saving. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

1.5.4.3 Warranting that Variation Are Compatible

When delivering a variation for approval, contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.5.4.4 Review Schedule Is Modified

In addition to normal submittal review period, a period of 10 working days will be allowed for consideration by the Government of submittals with variations.

1.5.5 Contractor's Responsibilities

- a. Determine and verify field measurements, materials, field construction criteria; review each submittal; and check and coordinate each submittal with requirements of the work and contract documents.
- b. Transmit submittals to QC organization in accordance with schedule on approved Submittal Register, and to prevent delays in the work, delays to government, or delays to separate contractors.
- c. Advise contracting officer of variation, as required by paragraph entitled "Variations."
- d. Correct and resubmit submittal as directed by approving authority. When resubmitting disapproved transmittals or transmittals noted for resubmittal, the contractor shall provide copy of that previously submitted transmittal including all reviewer comments for use by approving authority. Direct specific attention in writing or on resubmitted submittal, to revisions not requested by approving authority on previous submissions.

- e. Furnish additional copies of submittal when requested by contracting officer, to a limit of 20 copies per submittal.
- f. Complete work, which must be accomplished as basis of a submittal in time to allow submittal to occur as scheduled.
- g. Ensure no work has begun until submittals for that work have been returned as "approved," or "approved as noted" or "approved except as noted; resubmission not required", except to the extent that a portion of work must be accomplished as basis of submittal.

1.5.6 QC Organization Responsibilities

- a. Note date on which submittal was received from contractor on each submittal.
- b. Review each submittal; and check and coordinate each submittal with requirements of work and contract documents.
- c. Review submittals for conformance with project design concepts and compliance with contract documents.
- d. Act on submittals, determining appropriate action based on QC organization's review of submittal.
 - (1) When QC manager is approving authority, take appropriate action on submittal from the possible actions defined in paragraph entitled, "Actions Possible."
 - (2) When contracting officer is approving authority or when variation has been proposed, forward submittal to Government with certifying statement or return submittal marked "not reviewed" or "revise and resubmit" as appropriate. The QC organization's review of submittal determines appropriate action.
- e. Ensure that material is clearly legible.
- f. Stamp each sheet of each submittal with QC certifying statement or approving statement, except that data submitted in bound volume or on one sheet printed on two sides may be stamped on the front of the first sheet only.
 - (1) When approving authority is contracting officer, QC organization will certify submittals forwarded to contracting officer with the following certifying statement: "I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated with contract Number [____], is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is submitted for Government approval.
 Certified by Submittal Reviewer _____, Date _____
 (Signature when applicable)
 Certified by QC manager _____, Date _____ "
 (Signature)
 - (2) When approving authority is QC manager, QC manager will use the following approval statement when returning submittals to contractor as "Approved" or "Approved as Noted." "I hereby certify that the (material) (equipment) (article) shown and marked in this submittal and proposed to be incorporated with contract Number [____], is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is _____ approved for use.
 Certified by Submittal Reviewer _____, Date _____

(Signature when applicable)

Approved by QC manager _____, Date _____"

(Signature)

- g. Sign certifying statement or approval statement. The person signing certifying statements shall be QC organization member designated in the approved QC plan. The signatures shall be in original ink. Stamped signatures are not acceptable.
- h. Update submittal register [database] as submittal actions occur and maintain the submittal register at project site until final acceptance of all work by contracting officer.
- i. Retain a copy of approved submittals at project site, including contractor's copy of approved samples.

1.5.7 Government's Responsibilities

When approving authority is contracting Officer, the Government will:

- a. Note date on which submittal was received from QC manager, on each submittal for which the contracting officer is approving authority.
- b. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- c. Identify returned submittals with one of the actions defined in paragraph entitled "Actions Possible" and with markings appropriate for action indicated.

1.5.8 Actions Possible

Submittals will be returned with one of the following notations:

- a. Submittals marked "not reviewed" will indicate submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by contractor or for being incomplete, with appropriate action, coordination, or change.
- b. Submittals marked "approved" or "approved as submitted" authorize contractor to proceed with work covered.
- c. Submittals marked "approved as noted" or "approved except as noted; resubmission not required" authorize contractor to proceed with work as noted provided contractor takes no exception to the notations.
- d. Submittals marked "revise and resubmit" or "disapproved" indicate submittal is incomplete or does not comply with design concept or requirements of the contract documents and shall be resubmitted with appropriate changes. No work shall proceed for this item until resubmittal is approved.

1.6 FORMAT OF SUBMITTALS

1.6.1 Transmittal Form

Transmit each submittal, except sample installations and sample panels, to office of approving authority. Transmit submittals with transmittal form prescribed by contracting officer and standard for project. The transmittal form shall identify contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding sample panels and sample installations.

1.6.2 Identifying Submittals

Identify submittals, except sample panel and sample installation, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

- a. Project title and location.
- b. Construction contract number.
- c. Section number of the specification section by which submittal is required.
- d. Submittal description (SD) number of each component of submittal.
- e. When a resubmission, alphabetic suffix on submittal description, for example, SD-10A, to indicate resubmission.
- f. Name, address, and telephone number of subcontractor, supplier, manufacturer and any other second tier contractor associated with submittal.
- g. Product identification and location in project.

1.6.3 Format for Product Data

- a. Present product data submittals for each section as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.
- b. Indicate, by prominent notation, each product that is being submitted; indicate specification section number and paragraph number to which it pertains.
- c. Supplement product data with material prepared for project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project.
- d. Provide product data in metric dimensions. Where product data are included in preprinted catalogues with inch-pound units only, submit metric dimensions on separate sheet.

1.6.4 Format for Shop Drawings

- a. Shop drawings shall not be less than A4 (297 by 210 mm) 8 1/2 by 11 inches nor more than AO (1189 by 841 mm) 30 by 42 inches.
- b. Present A4 (297 by 210 mm) 8 1/2 by 11 inches sized shop drawings as part of the bound volume for submittals required by section. Present larger drawings in sets.

- c. Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph entitled "Identifying Submittals."
- d. Dimension drawings, except diagrams and schematic drawings; prepare drawings demonstrating interface with other trades to scale. Shop drawing dimensions shall be the same unit of measure as indicated on the contract drawings. Identify materials and products for work shown.
- e. Dimension shop drawings in metric.

1.6.5 Format of Samples

- a. Furnish samples in sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately same size as specified:
 - (1) Sample of Equipment or Device: Full size.
 - (2) Sample of Materials Less Than 50 by 75 mm 2 by 3 inches: Built up to A4 (297 by 210 mm) 8 1/2 by 11 inches.
 - (3) Sample of Materials Exceeding A4 (297 by 210 mm) 8 1/2 by 11 inches: Cut down to A4 (297 y 210 mm) 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
 - (4) Sample of Linear Devices or Materials: 250 mm 10 inch length or length to be supplied, if less than 250 mm 10 inches. Examples of linear devices or materials are conduit and handrails.
 - (5) Sample of Non-Solid Materials: 750 ml Pint. Examples of non-solid materials are sand and paint.
 - (6) Color Selection Samples: 50 by 100 mm 2 by 4 inches.
 - (7) Sample Panel: 1200 by 1200 mm 4 by 4 feet.
 - (8) Sample Installation: 10 square meters 100 square feet.
- b. Samples Showing Range of Variation: Where variations are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range.
- c. Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples shall be in undamaged condition at time of use.
- d. Recording of Sample Installation: Note and preserve the notation of area constituting sample installation but remove notation at final clean up of project.
- e. When color, texture or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.6.6 Format of Administrative Submittals

- a. When submittal includes a document, which is to be used in project or become part of project record, other than as a submittal, do not apply contractor's approval stamp to document, but to a separate sheet accompanying document.
- b. Operation and Maintenance Manual Data: Submit in accordance with Section 01781, "Operation and Maintenance Data." Include components required in that section and the various technical sections.
- c. Provide all dimensions in administrative submittals in metric. Where data are included in preprinted material with inch-pound units only, submit metric dimensions on separate sheet.

1.7 QUANTITY OF SUBMITTALS

1.7.1 Number of Copies of Product Data

- a. Submit six copies of submittals of product data requiring review and approval only by QC organization and seven copies of product data requiring review and approval by contracting officer. Submit three copies of submittals of product data for operation and maintenance manuals.

1.7.2 Number of Copies of Shop Drawings

Submit shop drawings in compliance with quantity requirements specified for product data.

1.7.3 Number of Samples

- a. Submit two samples, or two sets of samples showing range of variation, of each required item. One approved sample or set of samples will be retained by approving authority and one will be returned to contractor.
- b. Submit one sample panel. Include components listed in technical section or as directed.
- c. Submit one sample installation, where directed.
- d. Submit one sample of non-solid materials.

1.7.4 Number of Copies of Administrative Submittals

- a. Unless otherwise specified, submit administrative submittals compliance with quantity requirements specified for product data.
- b. Submit administrative submittals required under "SD-19 Operation and Maintenance Manuals" to conform to Section 01781, "Operation and Maintenance Data."

PART 2 PRODUCTS Not used

PART 3 EXECUTION Not used

SUBMITTAL REGISTER

CONTRACT NO: N62474-94-D-7609

PROJECT TITLE: Removal of Contaminated Surface Soil at IR02 Alameda Facility/Alameda Annex

| Contractor Assigned No. (b) | Spec Section No. (c) | Description Item Submitted (d) | Spec. Para No. (e) | Govt. Or A/E Review (f) | Planned Submittal Date (g) | Aprvl. By (h) | Action Code (j) | Action Date (k) | Submittal Date (l) | (m) | (n) | (o) | (p) | Aprvl. Recd Date (q) |
|-----------------------------|----------------------|---|--------------------|-------------------------|----------------------------|---------------|-----------------|-----------------|--------------------|-----|-----|-----|-----|----------------------|
| | 01450 | SD-01 PRECONSTRUCTION SUBMITTALS a. Quality Control Plan | 1.2 | G | | | | | | | | | | |
| | 01500 | SD-01 PRECONSTRUCTION SUBMITTALS a. Traffic Control Plan b. Construction Site Plan | 1.2.1 | G G | | | | | | | | | | |
| | 01575 | SD-12 RECORDS a. Preconstruction Survey Rpt. b. Disposal Documentation for Hazardous and Regulated Waste c. Employee 40 CFR 1910 training d. Stormwater Pollution Prevention Plan | 1.3.1 | | | | | | | | | | | |
| | 01770 | SD-11 CLOSEOUT a. As Built Drawings | 1.1 | | | | | | | | | | | |
| | 02315 | SD-06 TEST REPORTS a. Backfill Soil Tests b. Investigative Sample Results c. Confirmation Sample Results d. In Place Density Tests | 1.2.1 | G G G G | | | | | | | | | | |

End of Section

SECTION 01450 QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 880 (1995) Criteria for Use in Evaluation of Testing Laboratories and Organization for Examination and Inspection of Steel, Stainless Steel, and Related Alloys

ASTM C 1077 (1997) Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation

ASTM D 3666 (1996) Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Materials

ASTM D 3740 (1996) Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E 329 (1995; Rev. C) Agencies Engaged in the Testing and/or Inspection of Materials Used on Construction

ASTM E 543 (1996) Agencies Performing Nondestructive Testing

CORPS OF ENGINEERS (COE)

COE EM-385-1-1 (1996) Safety and Health Requirements Manual

1.2 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-01 Preconstruction Submittals

Quality Control (QC) plan; G

Submit a QC plan within 20 calendar days after receipt of Notice of Award. The QC Plan shall include a preliminary submittal of the list of definable features of work. Any approval by the Government of the QC Plan shall be considered to be "approved as noted, resubmittal required" and will be in effect only until the completed list of definable features of work is received and approved.

1.3 INFORMATION FOR THE CONTRACTING OFFICER

Prior to commencing work on construction, the Contractor can obtain a single copy set of the current report forms from the Contracting Officer, or by calling the local EFD/EFA QA Coordinator for an electronic version of the report forms. The report forms will consist of the Contractor Production Report, Contractor Production Report (Continuation Sheet), Contractor Quality Control Report, Contractor Quality Control Report (Continuation Sheet), Preparatory Phase Checklist, Initial Phase Checklist, Rework Items List, and Testing Plan and Log. Other reports referenced below may be in formats customarily used by the Contractor, Testing Laboratories, etc. and will contain the information required by this specification.

Deliver the following to the Contracting Officer:

- a. Contractor Quality Control Report; original and 1 copy, by 10:00 AM the next working day after each day that work is performed.
- b. Contractor Production Report: Original and 1 copy, by 10:00 AM the next working day after each day that work is performed, attached to the Contractor Quality Control Report.
- c. Preparatory Phase Checklist: Original attached to the original Contractor Quality Control Report and 1 copy attached to each copy.
- d. Initial Phase Checklist: Original attached to the original Contractor Quality Control Report and 1 copy attached to each copy.
- e. Testing Plan and Log, 2 copies, at the end of each month.
- f. Rework Items List: 2 copies, by the last working day of the month.
- g. QC Meeting Minutes: 2 copies, within 2 working days after the meeting.
- h. QC Certifications: As required by the paragraph entitled "QC Certifications."

1.4 QC PROGRAM REQUIREMENTS

Establish and maintain a QC program as described in this section. The QC program consists of a QC Organization, a QC Plan, a QC Plan Meeting, a Coordination and Mutual Understanding Meeting, QC meetings, three phases of control, submittal review and approval, testing, completion inspections, and QC certifications and documentation necessary to provide materials, equipment, workmanship, fabrication, construction and operations which comply with the requirements of this Contract. The QC program shall cover on-site and off-site work and shall be keyed to the work sequence. No work or testing may be performed unless the QC Manager is on the work site. The QC Manager shall report to an officer of the firm and shall not be subordinate to the Project Superintendent or the Project Manager. The QC Manager, Project Superintendent and Project Manager must work together effectively. Although the Quality Control Manager is the primary individual responsible for quality control, all three individuals will be held responsible for the quality of work on the job. The project superintendent will be held responsible for the quality of production.

1.4.1 Preliminary Work Authorized Prior to Approval

The only work that is authorized to proceed prior to the approval of the QC Plan is mobilization of storage and office trailers, temporary utilities, and surveying.

1.4.2 Approval

Approval of the QC Plan is required prior to the start of construction. The Contracting Officer reserves the right to require changes in the QC Plan and operations as necessary, including removal of personnel, to ensure the specified quality of work. The Contracting Officer reserves the right to interview any member of the QC organization at any time in order to verify the submitted qualifications. All QC organization personnel shall be subject to acceptance by the Contracting Officer. The Contracting Officer may require the removal of any individual for non-compliance with quality requirements specified in the contract.

1.4.3 Notification of Changes

Notify the Contracting Officer, in writing, of any proposed change, including changes in the QC organization personnel, a minimum of seven calendar days prior to a proposed change. Proposed changes shall be subject to acceptance by the Contracting Officer.

1.5 QC ORGANIZATION

1.5.1 QC Manager

1.5.1.1 Duties

Provide a QC Manager at the work site to implement and manage the QC program. In addition to implementing and managing the QC program, the QC Manager may perform the duties of project superintendent. The QC Manager is required to attend the QC Plan Meeting, attend the Coordination and Mutual Understanding Meeting, conduct the QC meetings, perform the three phases of control, perform submittal review and approval, ensure testing is performed and provide QC certifications and documentation required in this contract. The QC Manager is responsible for managing and coordinating the three phases of control and documentation performed by Testing Laboratory personnel and any other inspection and testing personnel required by this Contract.

1.5.1.2 Qualifications

An individual with a minimum of 10 years experience as a superintendent, inspector, QC Manager, project manager, or construction manager on similar size and type construction contracts which included the major trades that are part of this Contract. The individual must be familiar with the requirements of COE EM-385-1-1, and have experience in the areas of hazard identification and safety compliance.

1.5.1.3 Construction Quality Management Training

In addition to the above experience and education requirements, the QC Manager shall have completed the course entitled "Construction Quality Management for Contractors." The QC Manager shall have obtained the CQM course certification within 90 days of award.

1.5.2 Alternate QC Manager Duties and Qualifications

Designate an alternate for the QC Manager at the work site to serve in the event of the designated QC Manager's absence. The period of absence may not exceed two weeks at one time, and not more than 15 workdays during the project. The qualification requirements for the Alternate QC Manager shall be the same as for the QC manager.

1.6 QUALITY CONTROL (QC) PLAN

1.6.1 Requirements

Provide, for approval by the Contracting Officer, a QC plan submitted in a 3-ring binder with pages numbered sequentially that covers both on-site and off-site work and includes the following:

- a. A table of contents listing the major sections identified with tabs in the following order:

- I. QC ORGANIZATION
- II. NAMES AND QUALIFICATIONS
- III. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONNEL
- IV. OUTSIDE ORGANIZATIONS
- V. APPOINTMENT LETTERS
- VI. SUBMITTAL PROCEDURES AND INITIAL SUBMITTAL REGISTER

VII. TESTING LABORATORY INFORMATION
VIII. TESTING PLAN AND LOG
IX. PROCEDURES TO COMPLETE REWORK ITEMS
X. DOCUMENTATION PROCEDURES
XI. LIST OF DEFINABLE FEATURES
XII. PROCEDURES FOR PERFORMING THE THREE PHASES OF CONTROL
[XIII. PERSONNEL MATRIX]
[XIV. PROCEDURES FOR COMPLETION INSPECTION]

- b. A chart showing the QC organizational structure.
- c. Names and qualifications, in resume format, for each person in the QC organization. Include the CQM course certifications for the QC Manager and Alternate QC Manager as required by the paragraphs entitled "Construction Quality Management Training" and "Alternate QC Manager Duties and Qualifications."
- d. Duties, responsibilities and authorities of each person in the QC organization.
- e. A listing of outside organizations such as, architectural and consulting engineering firms that will be employed by the Contractor and a description of the services these firms will provide.
- f. Letters signed by an officer of the firm appointing the QC Manager and Alternate QC Manager and stating that they are responsible for implementing and managing the QC program as described in this contract. Include in this letter the responsibility of the QC Manager and Alternate QC Manager to implement and manage the three phases of quality control, and their authority to stop work which is not in compliance with the contract.
- g. Procedures for reviewing, approving and managing submittals. Provide the name of the person in the QC organization authorized to review and certify submittals prior to approval. Provide the initial submittal of the Submittal Register as specified in section entitled "Submittal Procedures."
- h. A Testing Plan and Log that includes the tests required, referenced by the specification paragraph number requiring the test, the frequency, and the person responsible for each test.
- i. Procedures to identify, record, track and complete rework items.
- j. Documentation procedures, including proposed report formats.
- k. List of definable features of work. A definable feature of work (DFOW) is a task that is separate and distinct from other tasks, has the same control requirements and work crews. The list shall be cross-referenced to the contractor's Construction Schedule and the specification sections.
- l. Procedures for Performing the Three Phases of Control. For each DFOW, provide the DFOW's Preparatory and Initial Phase Checklists. Each list shall include a breakdown of quality checks that will be used when performing the quality control functions, inspections, and tests required by the contract documents. The Preparatory and Initial Phases and meetings shall be conducted with a view towards obtaining quality construction by planning ahead and identifying potential problems for each definable feature of work.

1.7 QC PLAN MEETING

Prior to submission of the QC plan, meet with the Contracting Officer to discuss the QC plan requirements of this Contract. The purpose of this meeting is to develop a mutual understanding of the QC plan requirements prior to plan development and submission.

1.8 COORDINATION AND MUTUAL UNDERSTANDING MEETING

After submission of the QC Plan, and prior to the start of construction, meet with the Contracting Officer to present the QC program required by this Contract. The purpose of this meeting is to develop a mutual understanding of the QC details, including documentation, administration for on-site and off-site work, and the coordination of the Contractor's management, production and QC personnel. At the meeting, the Contractor will be required to explain in detail how three phases of control will be implemented for each definable feature of work. As a minimum, the Contractor's personnel required to attend shall include an officer of the firm, the project manager, project superintendent, QC Manager, Alternate QC Manager A/E, and subcontractor representatives. Each subcontractor who will be assigned QC responsibilities shall have a principal of the firm at the meeting. Minutes of the meeting will be prepared by the QC Manager and signed by the Contractor, the A/E and the Contracting Officer. A copy of the signed minutes shall be provided to all attendees by the Contractor. Repeat the coordination and mutual understanding meeting when a new QC Manager is appointed.

1.9 QC MEETINGS

After the start of construction, the QC Manager shall conduct weekly QC meetings at the work site with the project superintendent. The QC Manager shall prepare the minutes of the meeting and provide a copy to the Contracting Officer within 2 working days after the meeting. The Contracting Officer may attend these meetings. The QC Manager shall notify the Contracting Officer at least 48 hours in advance of each meeting. As a minimum, the following shall be accomplished at each meeting:

- a. Review the minutes of the previous meeting;
- b. Review the schedule and the status of work:
 - (1) Work or testing accomplished since last meeting
 - (2) Rework items identified since last meeting
 - (3) Rework items completed since last meeting;
- c. Review the status of submittals:
 - (1) Submittals reviewed and approved since last meeting
 - (2) Submittals required in the near future;
- d. Review the work to be accomplished in the next 2 weeks and documentation required:
 - (1) Establish completion dates for rework items
 - (2) Update the schedule showing planned and actual dates of the preparatory, initial and follow-up phases, including testing and any other inspection required by this contract
 - (3) Discuss construction methods and the approach that will be used to provide quality construction by planning ahead and identifying potential problems for each definable feature of work
 - (4) Discuss status of off-site work or testing
 - (5) Documentation required;
 - (6) Discuss upcoming Activity Hazard Analyses:
- e. Resolve QC and production problems:
 - (1) Assist in resolving Request for Information issues; and
- f. Address items that may require revising the QC plan:
 - (1) Changes in QC organization personnel
 - (2) Changes in procedures.
- g. Review health and safety plan

1.10 THREE PHASES OF CONTROL

The Three Phases of Control shall adequately cover both on-site and off-site work and shall include the following for each definable feature of work.

1.10.1 Preparatory Phase

Notify the Contracting Officer at least 2 work days in advance of each preparatory phase. This phase shall include a meeting conducted by the QC Manager and attended by the superintendent, and the foreman responsible for the definable feature. Document the results of the preparatory phase actions in the daily Contractor Quality Control Report. Perform the following prior to beginning work on each definable feature of work:

- a. Review each paragraph of the applicable specification sections.
- b. Review the Contract drawings;
- c. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required;
- d. Review the testing plan and ensure that provisions have been made to provide the required QC testing;
- e. Examine the work area to ensure that the required preliminary work has been completed;
- f. Examine the required materials, equipment and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data;
- g. Discuss construction methods, construction tolerances, workmanship standards, and the approach that will be used to provide quality construction by planning ahead and identifying potential problems for each definable feature of work; and
- h. Review the safety plan and appropriate activity hazard analysis to ensure that applicable safety requirements are met, and that required Material Safety Data Sheets (MSDS) are submitted.

1.10.2 Initial Phase

Notify the Contracting Officer at least 2 work days in advance of each initial phase. When construction crews are ready to start work on a definable feature of work, conduct the initial phase with, the superintendent, and the foreman responsible for that definable feature of work. Observe the initial segment of the definable feature of work to ensure that the work complies with Contract requirements. Document the results of the initial phase in the daily Contractor Quality Control Report. Repeat the initial phase for each new crew to work on-site, or when acceptable levels of specified quality are not being met. Perform the following for each definable feature of work:

- a. Establish the quality of workmanship required;
- b. Resolve conflicts;
- c. Ensure that testing is performed [by the approved laboratory], and
- d. Check work procedures for compliance with the Safety Plan and the appropriate activity hazard analysis to ensure that applicable safety requirements are met.

1.10.3 Follow-Up Phase

Perform the following for on-going work daily, or more frequently as necessary until the completion of each definable feature of work and document in the daily Contractor Quality Control Report:

- a. Ensure the work is in compliance with Contract requirements;
- b. Maintain the quality of workmanship required;
- c. Ensure that testing is performed [by the approved laboratory];
- d. Ensure that rework items are being corrected; and
- e. Perform safety inspections.

1.10.4 Additional Preparatory and Initial Phases

Additional Preparatory and Initial Phases shall be conducted on the same definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable QC organization, if there are changes in the on-site production supervision or work crew, if work on a definable feature is resumed after substantial period of inactivity, or if other problems develop.

1.10.5 Notification of Three Phases of Control for Off-Site Work

Notify the Contracting Officer at least two weeks prior to the start of the preparatory and initial phases.

1.11 SUBMITTAL REVIEW AND APPROVAL

Procedures for submission, review and approval of submittals are described in section entitled "Submittal Procedures."

1.12 TESTING

Except as stated otherwise in the specification sections, perform sampling and testing required under this Contract.

1.12.5 Test Results

Cite applicable Contract requirements, tests or analytical procedures used. Provide actual results and include a statement that the item tested or analyzed conforms or fails to conform to specified requirements. If the item fails to conform, notify Contracting Officer immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results shall be signed by a testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the Contracting Officer via the QC Manager. Furnish a summary report of field tests at the end of each month. Attach a copy of the summary report to the last daily Contractor Quality Control Report of each month.

1.12.6 Test Reports and Monthly Summary Report of Tests

The QC Manager shall furnish the signed reports, certifications, and a summary report of field tests at the end of each month to the Contracting Officer. Attach a copy of the summary report to the last daily Contractor Quality Control Report of each month.

1.13 QC CERTIFICATIONS

1.13.1 Contractor Quality Control Report Certification

Each Contractor Quality Control Report shall contain the following statement: "On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract drawings and specifications to the best of my knowledge, except as noted in this report."

1.13.2 Invoice Certification

Furnish a certificate to the Contracting Officer with each payment request, signed by the QC Manager, attesting that as-built drawings are current and attesting that the work for which payment is requested, including stored material, is in compliance with contract requirements.

1.13.3 Completion Certification

Upon completion of work under this Contract, the QC Manager shall furnish a certificate to the Contracting Officer attesting that "the work has been completed, inspected, tested and is in compliance with the Contract."

1.14 COMPLETION INSPECTIONS

1.14.1 Punch-Out Inspection

Near the completion of all work or any increment thereof established by a completion time stated in the Contract Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the QC Manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Include in the punch list any remaining items on the "Rework Items List" which were not corrected prior to the Punch-Out Inspection. The punch list shall include the estimated date by which the deficiencies will be corrected. A copy of the punch list shall be provided to the Contracting Officer. The QC Manager or staff shall make follow-on inspections to ascertain that all deficiencies have been corrected. Once this is accomplished the Contractor shall notify the Government that the facility is ready for the Government "Pre-Final Inspection."

1.14.2 Pre-Final Inspection

The Government will perform this inspection to verify that the facility is complete and ready to be occupied. A Government "Pre-Final Punch List" may be developed as a result of this inspection. The QC Manager shall ensure that all items on this list are corrected prior to notifying the Government that a "Final" inspection with the customer can be scheduled. Any items noted on the "Pre-Final" inspection shall be corrected in timely manner and shall be accomplished before the contract completion date for the work or any particular increment thereof if the project is divided into increments by separate completion dates.

1.14.3 Final Acceptance Inspection

The QC Manager, the QC specialists, the superintendent or other primary contractor management personnel, and the Contracting Officer's representative will be in attendance at this inspection. Additional Government personnel may be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the "Pre-Final" inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final inspection stating that all specific items previously identified to the Contractor as being unacceptable, along with all the remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the Contract Clause entitled "Inspection of Construction." When the Contracting Officer takes

possession of partially completed work, it will be in accordance with Contract Clause "Use and Possession Prior to Completion."

1.15 DOCUMENTATION

Maintain current and complete records of on-site and off-site QC program operations and activities.

1.15.1 Contractor Production Report

Reports are required for each day that work is performed and shall be attached to the Contractor Quality Control Report prepared for the same day. Account for each calendar day throughout the life of the Contract. The reporting of work shall be identified by terminology consistent with the construction schedule. Contractor Production Reports are to be prepared, signed and dated by the project superintendent and shall contain the following information:

- a. Date of report, report number, name of contractor, Contract number, title and location of Contract and superintendent present.
- b. Weather conditions in the morning and in the afternoon including maximum and minimum temperatures.
- c. Identify work performed by corresponding Schedule Activity No., PC#, Modification No., etc.
- d. A list of Contractor and subcontractor personnel on the work site, their trades, employer, work location, description of work performed, hours worked by trade, daily total work hours on work site this date (incl hours on continuation sheets), and total work hours from start of construction.
- e. A list of job safety actions taken and safety inspections conducted. Indicate that safety requirements have been met SECTION 01450 Page 27.including the results on the following:
 - (1) Was a job safety meeting held this date? (If YES, attach a copy of the meeting minutes.)
 - (2) Were there any lost time accidents this date? (If YES, attach a copy of the completed OSHA report.)
 - (3) Was crane/manlift/trenching/scaffold/hv electrical/high work/hazmat work done? (If YES, attach a statement or checklist showing inspection performed.)
 - (4) Was hazardous material/waste released into the environment? (If YES, attach a description of incident and proposed action.)
 - (5) Identify Schedule Activity No. related to safety action and list safety actions taken today and safety inspections conducted.
- f. Identify Schedule Activity No., Submittal # and list equipment/material received each day that is incorporated into the job.
- g. Identify Schedule Activity No., Owner and list construction and plant equipment on the work site including the number of hours used.
- h. Include a "remarks" section in this report which will contain pertinent information including directions received, problems encountered during construction, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered and a record of visitors to the work site. For each remark given, identify the Schedule Activity No. that is associated with the remark.

1.15.1.1 Contractor Production Report (Continuation Sheet)

Additional space required to contain daily information on the Contractor Production Report will be placed on its Continuation Sheet(s). An unlimited number of Continuation Sheets may be added as necessary and attached to the Production Report.

1.15.2 Contractor Quality Control Report

Reports are required for each day that work is performed and for every seven consecutive calendar days of no-work and on the last day of a no-work period. Account for each calendar day throughout the life of the Contract. The reporting of work shall be identified by terminology consistent with the construction schedule. Contractor Quality Control Reports are to be prepared, signed and dated by the QC Manager and shall contain the following information:

- a. Date of report, report number, Contract Number, and Contract Title.
- b. Indicate if Preparatory Phase work was performed today (Yes/No checkboxes).
- c. If Preparatory Phase work was performed today (including on-site and off-site work), identify its Schedule Activity No. and Definable Feature of Work. The Index # is a cross reference to the Preparatory Phase Checklist. An example of the Index # is: 0025-P01, where "0025" is the Contractor Quality Control Report Number, "P" indicates Preparatory Phase, and "01" is the Preparatory Phase Checklist number(s) for this date. Each entry in this section must be accompanied with a corresponding Preparatory Phase Checklist.
- d. Indicate if Initial Phase work was performed today (Yes/No checkboxes).
- e. If Initial Phase work was performed today (including on-site and off-site work), identify its Schedule Activity No. and Definable Feature of Work. The Index # is a cross reference to the Initial Phase Checklist. An example of the Index # is: 0025-I01, where "0025" is the Contractor Quality Control Report Number, "I" indicates Initial Phase, and "01" is the Initial Phase Checklist number(s) for this date. Each entry in this section must be accompanied with a corresponding Initial Phase Checklist.
- f. Results of the Follow-up Phase inspections held today (including on-site and off-site work), including Schedule Activity No., the location of the definable feature of work, Specification Sections, etc. Indicate in the report for this definable feature of work that the work complies with the Contract as approved in the Initial Phase, work complies with safety requirements, and that required testing has been performed and include a list of who performed the tests.
- g. List the rework items identified, but not corrected by close of business; along with its associated Schedule Activity Number.
- h. List the rework items corrected from the rework items list along with the corrective action taken and its associated Schedule Activity Number.
- i. Include a "remarks" section in this report which will contain pertinent information including directions received, quality control problem areas, deviations from the QC plan, construction deficiencies encountered, QC meetings held, acknowledgement that as-built drawings have been updated, corrective direction given by the QC Organization and corrective action taken by the Contractor. For each remark given, identify the Schedule Activity No. that is associated with the remark.
- j. Contractor Quality Control Report certification, signature and date.

1.15.2.1 Contractor Quality Control Report (Continuation Sheet)

Additional space required to contain daily information on the Contractor Quality Control Report will be placed on its Continuation Sheet(s). An unlimited number of Continuation Sheets may be added as necessary and attached to the Contractor Quality Control Report.

1.15.3 Preparatory Phase Checklist

Each Definable Feature of Work that is in the Preparatory Phase shall have this checklist filled out for it. The checklist shall be identified by terminology consistent with the construction schedule. Attach this checklist to the Contractor Quality Control Report of the same date.

- a. Specification Section, date of report, and Contract number shall be filled out. Duplicate this information in the header of the second page of the report.
- b. Definable Feature of Work, Schedule Activity No. and Index # entry and format will match entry in the Preparatory Phase section of the Contractor Quality Control Report. Duplicate this information in the header of the second page of the report.
- c. Personnel Present: Indicate the number of hours of advance notice that was given to the Government Representative and indicate (Yes/No checkboxes) whether or not the Government Rep was notified. Indicate the Names of Preparatory Phase Meeting attendees, their position and company/government they are with.
- d. Submittals: Indicate if submittals have been approved (Yes/No checkboxes), if no indicate what has not been submitted. Are materials on hand (Yes/No checkboxes) and if not, what items are missing. Check delivered material/equipment against approved submittals and comment as required.
- e. Material Storage: Indicate if materials/equipment is stored properly (Yes/No checkboxes) and if not, what action is/was taken.
- f. Specifications: Review and comment on Specification Paragraphs that describe the material/equipment, procedure for accomplishing the work and clarify any differences.
- g. Preliminary Work & Permits: Ensure preliminary work is in accordance with the contract documents and necessary permits are on file, if not, describe the action taken.
- h. Testing: Identify who performs tests, the frequency, and where tests are to occur. Review the testing plan, report abnormalities, and if the test facilities have been approved.
- i. Safety: Indicate if the activity hazard analysis has been approved (Yes/No checkboxes) and comment on the review of the applicable portions of the COE EM-385-1-1.
- j. Meeting Comments: Note comments and remarks during the Preparatory Phase Meeting that was not addressed in previous sections of this checklist.
- k. Other Items or Remarks: Note any other remarks or items that were a result of the Preparatory Phase.
- l. QC Manager will sign and date the checklist.

1.15.4 Initial Phase Checklist

Each Definable Feature of Work that is in the Initial Phase shall have this checklist filled out for it. The checklist shall be identified by terminology consistent with the construction schedule. Attach this

checklist to the Contractor Quality Control Report of the same date.

- a. Specification Section, date of report, and Contract number shall be entered.
- b. Definable Feature of Work, Schedule Activity No. and Index # entry and format will match entry in the Initial Phase section of the Contractor Quality Control Report.
- c. Personnel Present: Indicate the number of hours of advance notice that was given to the Government Representative and indicate (Yes/No checkboxes) whether or not the Government Rep was notified. Indicate the Names of Initial Phase Meeting attendees, their position and company/government they are with.
- d. Procedure Compliance: Comment on compliance with procedures identified at Preparatory Phase of Control and assurance that work is in accordance with plans, specifications and submittals.
- e. Preliminary Work: Ensure preliminary work being placed is in compliance and if not, what action is/was taken.
- f. Workmanship: Identify where initial work is located; if a sample panel is required (Yes/No checkboxes); is the initial work the sample (Yes/No checkboxes); and if Yes, describe the panel location and precautions taken to preserve the sample.
- g. Resolution: Comment on any differences and the resolutions reached.
- h. Check Safety: Comment on the safety review of the job conditions.
- i. Other: Note any other remarks or items that were a result of the Initial Phase.
- j. QC Manager will sign and date the checklist.

1.15.5 Quality Control Validation

Establish and maintain the following in a series of 3 ring binders. Binders shall be divided and tabbed as shown below. These binders shall be readily available to the Government's Quality Assurance Team during all business hours.

- a. All completed Preparatory and Initial Phase Checklists, arranged by specification section.
- b. All milestone inspections, arranged by Activity/Event Number.
- c. A current up-to-date copy of the Testing and Plan Log with supporting field test reports, arranged by specification section.
- d. Copies of all contract modifications, arranged in numerical order. Also include documentation that modified work was accomplished.
- e. A current up-to-date copy of the Rework Items List.
- f. Maintain up-to-date copies of all punch lists issued by the QC Staff on the Contractor and Sub-Contractors and all punch lists issued by the Government.

1.15.7 Testing Plan and Log

As tests are performed, the QC Manager shall record on the "Testing Plan and Log" the date the test was conducted, the date the test results were forwarded to the Contracting Officer, remarks and acknowledgement that an accredited or Contracting Officer approved testing laboratory was used. Attach a copy of the updated "Testing Plan and Log" to the last daily Contractor Quality Control Report of each month.

1.15.8 Rework Items List

The QC Manager shall maintain a list of work that does not comply with the Contract, identifying what items need to be reworked, the date the item was originally discovered, the date the item will be corrected by, and the date the item was corrected. There is no requirement to report a rework item that is corrected the same day it is discovered. Attach a copy of the "Rework Items List" to the last daily Contractor Quality Control Report of each month. The Contractor shall be responsible for including on this list items needing rework including those identified by the Contracting Officer.

1.15.9 As-Built Drawings

The QC Manager is required to ensure the as-built drawings, required by Section 01770, "Closeout Procedures," are kept current on a daily basis and marked to show deviations which have been made from the Contract drawings. Ensure each deviation has been identified with the appropriate modifying documentation (e.g. PC No., Modification No., Request for Information No., etc.). The QC Manager [or QC specialist assigned to an area of responsibility] shall initial each deviation and each revision. Upon completion of work, the QC Manager shall furnish a certificate attesting to the accuracy of the as-built drawings prior to submission to the Contracting Officer.

1.15.10 Report Forms

The following forms, are acceptable for providing the information required by the paragraph entitled "Documentation." While use of these specific formats are not required, any other format used shall contain the same information:

- a. Contractor Quality Control Report w/ continuation sheet(s).
- b. Contractor Production Report w/ continuation sheet(s).
- c. Preparatory Phase Checklist.
- d. Initial Phase Checklist.
- e. Testing Plan and Log.
- f. Rework Items List.

1.16 NOTIFICATION ON NON-COMPLIANCE

The Contracting Officer will notify the Contractor of any detected non-compliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time for excess costs or damages by the Contractor.

PART 2 PRODUCTS
Not used.

PART 3 EXECUTION
Not used.

-- End of Section --

SECTION 01500
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

1.2 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

1.2.1 SD-04 Drawings

- a. Traffic control plan G two weeks prior to the start of work, submit a site plan showing haul routes to be used for trucks entering and leaving the site.
- b. Construction site plan G two weeks or more prior to the start of work, submit a site plan showing the locations of temporary facilities (including layouts and details, equipment and material storage area (onsite and offsite), and access and haul routes used for this contract. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

1.3 TEMPORARY UTILITIES

Reasonable amounts of the following utilities will be made available to the Contractor without charge:

- a. Electricity
- b. Potable Water

1.3.1 Contractor Utilities

The Contractor shall provide any other needed utilities.

1.7 STORAGE AREAS

Contractor shall be responsible for security of his property. The Contract Clause entitled "FAR 52.236-10, Operations and Storage Areas" apply:

1.7.1 Storage in Existing Buildings

If desired, the contractor may store material and equipment inside building 365, the former hangar building.

1.8 TEMPORARY SANITARY FACILITIES

Provide temporary sewer and sanitation facilities that are self-contained units with both urinals and stool capabilities. Ventilate the units to control odors and fumes and empty and clean them at least once a week or more often if required by the Contracting Officer. The doors shall be self-closing. Locate the facility within the construction fence or out of the public view.

1.9 TEMPORARY BUILDINGS

Temporary facilities (including trailers) shall be in like new condition. Locate these facilities within 1,000 feet of the operations Area. Storage of material/debris under such facilities is prohibited. Contractor shall be responsible for the security of the stored property.

PART 2 MATERIALS (not used)

PART 3 EXECUTION

3.1 TEMPORARY PHYSICAL CONTROLS

3.1.1 Fencing

Fencing shall be provided along the construction site at all open excavations and tunnels to control access by unauthorized people. Fencing must be installed to be able to restrain a force of at least 250 pounds against it. Enclose the project work area and Contractor lay-down area with a 8 ft high chain link fence and gates. Remove the fence upon completion and acceptance of the work.

3.1.2 Signs

Place warning signs at the construction area perimeter designating the presence of construction hazards requiring unauthorized persons to keep out. Signs must be placed on all sides of the project, with at least one sign every 300 feet. All points of entry shall have signs designating the construction site as a hard hat area.

-- End of Section --

SECTION 01575
TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.120 Hazardous Waste Operations and Emergency Response at Uncontrolled Hazardous Waste Sites

40 CFR 122.26 EPA National Pollutant Discharge Elimination System Permit Regulations

40 CFR 241 Guidelines for Disposal of Solid Waste

40 CFR 243 Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste

40 CFR 258 Subtitle D Landfill Requirements

40 CFR 261 Identification and Listing of Hazardous Waste

40 CFR 262 Generators of Hazardous Waste

40 CFR 263 Transporters of Hazardous Waste

40 CFR 264 Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

40 CFR 265 Interim Status Standard for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

40 CFR 266 Management of Specific Hazardous Waste and Specific Types of Hazardous Waste Management Facilities

40 CFR 268 Land Disposal Restrictions

40 CFR 279 Used Oil Regulations

40 CFR 300 National Oil and Hazardous Substances Pollution Contingency Plan

40 CFR 372-SUBPART D EPA Toxic Chemical Release Reporting Regulations

40 CFR 761 Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions under the Toxic Substances Control Act (TSCA)

49 CFR 173 Shipments and Packaging

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 832-R-92-005 Storm Water Management for Construction Activities

STATE OF CALIFORNIA

BAAQMD CEQA BAAQMD CEQA Guidelines, Assessing the Air Quality Impacts of Projects and Plans. April 1996. Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) guidelines

1.2 DEFINITIONS

1.2.1 Sediment

Soil and other debris that have eroded and have been transported by runoff water or wind.

1.2.2 Solid Waste

Garbage, refuse, debris, sludge, or other discharged material (except hazardous waste as defined in paragraph entitled "Hazardous Waste" or hazardous debris as defined in paragraph entitled "Hazardous Debris"), including solid, liquid, semisolid, or contained gaseous materials resulting from domestic, industrial, commercial, mining, or agricultural operations. Material not regulated as solid waste are: nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

- a. Green waste: The vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.
- b. Surplus soil: Existing soil that is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included.
- c. Inert construction and demolition debris: Broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. Inert materials may be re-inforced with or contain ferrous wire, rods, accessories and weldments.
- d. Wood: Dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated and/or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included.
- e. Scrap metal: Scrap and excess ferrous and non-ferrous metals such as re-inforcing steel, structural shapes, pipe and wire that are recovered or collected and disposed of as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.
- f. Recyclables: Materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable. Metal meeting the definition of lead contaminated or lead based paint contaminated may be included as recyclable if sold to a scrap metal company.
- g. Storm Water: Any water originating from precipitation falling on the site that leaves the site via overland flow or through the storm water system.

1.2.3 Debris

Non-hazardous solid material generated during the construction, demolition, or renovation of a structure which exceeds 2.5 inch particle size that is: a manufactured object; plant or animal matter; or natural geologic material (e.g. cobbles and boulders). A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

1.2.4 Hazardous Debris

As defined in paragraph entitled "Debris" of this section, debris that contains listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) per 40 CFR 261; or debris that exhibits a characteristic of hazardous waste per 40 CFR 261.

1.2.5 Chemical Wastes

This includes salts, acids, alkalis, herbicides, pesticides, and organic chemicals.

1.2.6 Garbage

Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

1.2.7 Hazardous Waste

Hazardous waste as defined in 40 CFR 261 or as defined by applicable State and local regulations.

1.2.8 Oily Waste

Petroleum products and bituminous materials.

1.2.9 Class I Ozone Depleting Substance (ODS)

Class I ODS is defined in Section 602(a) of The Clean Air Act and includes the following chemicals:

- chlorofluorocarbon-11 (CFC-11) chlorofluorocarbon-213 (CFC-213)
- chlorofluorocarbon-12 (CFC-12) chlorofluorocarbon-214 (CFC-214)
- chlorofluorocarbon-13 (CFC-13) chlorofluorocarbon-215 (CFC-215)
- chlorofluorocarbon-111 (CFC-111) chlorofluorocarbon-216 (CFC-216)
- chlorofluorocarbon-112 (CFC-112) chlorofluorocarbon-217 (CFC-217)
- chlorofluorocarbon-113 (CFC-113) halon-1211
- chlorofluorocarbon-114 (CFC-114) halon-1301
- chlorofluorocarbon-115 (CFC-115) halon-2402
- chlorofluorocarbon-211 (CFC-211) carbon tetrachloride
- chlorofluorocarbon-212 (CFC-212) methyl chloroform

1.3 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

1.3.1 SD-18 Records

Some of the records listed below are also required as part of other submittals. For the "Records" submittal, maintain on-site a separate three-ring Environmental Records binder and submit at the completion of the project. Make separate parts to the binder corresponding to each of the applicable subitems listed below.

- a. Preconstruction survey

- b. Disposal documentation for hazardous and regulated waste
- c. Contractor 40 CFR employee training records
- d. Storm Water Pollution Prevention Plan
- e. Solid waste disposal report

1.3.1.1 Preconstruction Survey

Perform a preconstruction survey of the project site with the Contracting Officer, and take photographs showing existing environmental conditions in and adjacent to the site. Submit a brief report for the record.

1.3.1.2 Disposal Documentation for Hazardous and Regulated Waste

Submit a copy of the applicable EPA [and State] permit(s), manifest(s), or license(s) for transportation, treatment, storage, and disposal of hazardous and regulated waste by permitted facilities.

1.3.1.3 Contractor 29 CFR Employee Training Records

Prepare and maintain employee training records throughout the term of the contract meeting applicable 29 CFR requirements. Submit these training records to the Contracting Officer at the conclusion of the project, unless otherwise directed.

1.3.1.4 Regulatory Notification

The Contractor is responsible for all regulatory notification requirements in accordance with Federal, State and local regulations. The Contractor shall forward copies to the Contracting Officer prior to commencement of work activities. Typically, regulatory notifications must be provided for the following (this listing is not all inclusive): demolition, renovation, NPDES defined site work, remediation of controlled substances (asbestos, hazardous waste, lead paint).

1.3.1.5 Storm Water Pollution Prevention Measures and Notice of Intent

The California State Water Resources control Board (SWRCB), Order No. 92-08 DWQ requires compliance with federal regulations for control of storm water discharges under the Clean Water Act. These regulations are described in 40 CFR 122.26, EPA 832-R-92-005, and apply to any construction requiring the disturbance of greater than 5 acres of land, as may occur in this project. Since this project is performed under CERCLA, the contractor must comply with only the substantive requirements of these regulations, and a General Construction Activity Storm Water Permit they describe is not required.

1.3.1.6 Solid Waste Disposal Report

The Contractor shall submit a monthly solid waste disposal report to the Contracting Officer. For each waste, the report shall state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste. The contractor shall include copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, the Contractor may submit a statement indicating the disposal location for the solid waste which is signed by an officer of the Contractor firm authorized to legally obligate or bind the firm. The sales documentation or Contractor certification shall include the receiver's tax identification number and business, EPA or State registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained by the Contractor for his own use, the Contractor shall submit on the solid waste disposal report the information previously described in this paragraph. Prices paid or received shall not be reported to the Contracting Officer unless required by other provisions or specifications of this Contract or public law.

1.4 CLASS I ODS PROHIBITION

Class I ODS as defined and identified herein shall not be used in the performance of this contract, nor be provided as part of the equipment. This prohibition shall be considered to prevail over any other provision, specification, drawing, or referenced documents.

1.5 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Comply with Federal, State, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

1.5.1 Facility Hazardous Waste Generator Status

Alameda Facility/Alameda Annex is designated as a Conditionally Exempt-Small Quantity Generator. All work conducted within the boundaries of this activity must meet the substantive regulatory requirements of this generator designation. The Contractor shall comply with all provisions of Federal, State and local regulatory requirements applicable to this generator status regarding training and storage, handling, and disposal of all construction derived wastes.

1.5.2 Licenses and Permits

Obtain licenses and permits pursuant to the "Permits and Responsibilities" FAR Clause. For permits obtained by the Contracting Officer, whether or not required by the permit, the Contractor is responsible to perform quality control inspections of the work in progress, and to submit notifications and certifications to the applicable regulatory agency, via the Contracting Officer, that the work conforms to the contract and permit requirements. The inspections and certifications shall be provided through the services of a registered Professional Engineer. As a part of the quality control plan, which is required to be submitted for approval by the quality control section, provide a subitem containing the name, P.E. registration number, address, and telephone number of the professional engineer(s) who will be performing the inspections and certifications for each permit listed above.

1.5.3 Contractor Liabilities for Environmental Protection

The Contractor is advised that this project and the facility are subject to Federal, State, and local regulatory agency inspections to review compliance with environmental laws and regulations. The Contractor shall fully cooperate with any representative from any Federal, State or local regulatory agency who may visit the job site and shall provide immediate notification to the Contracting Officer, who shall accompany them on any subsequent site inspections. The Contractor shall complete, maintain, and make available to the Contracting Officer, station, or regulatory agency personnel all documentation relating to environmental compliance under applicable Federal, State and local laws and regulations. The Contractor shall immediately notify the Contracting Officer if a Notice of Violation (NOV) is issued to the Contractor.

The Contractor shall be responsible for all damages to persons or property resulting from Contractor fault or negligence as well as for the payment of any civil fines or penalties which may be assessed by any Federal, State or local regulatory agency as a result of the Contractor's or any subcontractor's violation of any applicable Federal, State or local environmental law or regulation. Should a Notice of Violation (NOV), Notice of Noncompliance (NON), Notice of Deficiency (NOD), or similar regulatory agency notice be issued to the Government as facility owner/operator on account of the actions or inactions of the Contractor or one of its subcontractors in the performance of work under this contract, the Contractor shall fully cooperate with the Government in defending against regulatory assessment of any civil fines or penalties arising out of such actions or inactions.

1.6 UNFORESEEN HAZARDOUS OR REGULATED MATERIAL

All known hazardous or regulated materials are indicated in the contract documents. If material that is not indicated in the contract documents is encountered that may be dangerous to human health upon disturbance during construction operations, stop that portion of work and notify the Contracting Officer immediately. Intent is to identify materials such as PCB, lead paint, mercury, petroleum products, and friable and nonfriable asbestos. Within 14 calendar days the Government will determine if the material is hazardous. If the material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If the material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

Part 2 MATERIALS (not used)

PART 3 EXECUTION

3.1 Temporary Protection of Erodible Soils

Use the following methods to prevent erosion and control sedimentation:

3.1.1 Mechanical Retardation and Control of Runoff

Mechanically retard and control the rate of runoff from the construction site. This includes construction of diversion ditches, benches, berms, and use of silt fences and straw bales to retard and divert runoff to protected drainage courses. All such measures shall be described in the SWPPP.

3.2 CONTROL AND DISPOSAL OF SOLID WASTES

Pick up solid wastes, and place in covered containers that are regularly emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Recycling is encouraged and can be coordinated with the Contracting Officer and the activity recycling coordinator. Remove all solid waste (including non-hazardous debris) from Government property and dispose off-site at an approved landfill. Solid waste disposal off-site must comply with most stringent local, State, and Federal requirements including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

3.3 CONTROL AND DISPOSAL OF HAZARDOUS WASTES

3.3.1 Hazardous Waste/Debris Management

The Contractor shall identify all construction activities that will generate hazardous waste/debris. The Contractor must provide a documented waste determination for all resultant waste streams. Hazardous waste/debris shall be identified, labeled, handled, stored, and disposed of in accordance with all Federal, State, and local regulations including 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, 40 CFR 268 and 40 CFR 761. Store hazardous wastes in approved containers in accordance with 49 CFR 173. Hazardous waste generated within the confines of Government facilities shall be identified as being generated by the Government. Prior to removal of any hazardous waste from Government property, all hazardous waste manifests must be signed by activity personnel from the Station Environmental Office. No hazardous waste shall be brought onto Government property. Provide to the Contracting Officer a copy of waste determination documentation for any solid waste streams that have any potential to be hazardous waste or contain any chemical constituents listed in 40 CFR 372-SUBPART D. For hazardous wastes spills, verbally notify the Contracting Officer immediately.

3.3.1.1 Regulated Waste Storage/Satellite Accumulation/90 Day Storage Areas

If the work requires the temporary storage/collection of regulated or hazardous wastes, the Contractor may request the establishment of a Regulated Waste Storage Area, a Satellite Accumulation Area, or a 90 Day Storage Area at the point of generation. The Contractor must submit a request in writing to the Contracting Officer providing the following information:

Contract Number _____ Contractor _____
Haz/Waste or
Regulated Waste POC _____ Phone Number _____
Type of Waste _____ Source of Waste _____
Emergency POC _____ Phone Number _____
Location of the Site: _____
(Attach Site Plan to the Request)

Attach a waste determination form. Allow ten working days for processing this request.

3.3.2 Hazardous Material Control

The Contractor shall include hazardous material control procedures in the Safety Plan. The procedures shall address and ensure the proper handling of hazardous materials, including the appropriate transportation requirements. The Contractor shall submit a MSDS and estimated quantities to be used for each hazardous material to the Contracting Officer prior to bringing the material on base. Typical materials requiring MSDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. At the end of the project, the Contractor shall provide the Contracting Officer with the maximum quantity of each material that was present at the site at any one time, the dates the material was present, the amount of each material that was used during the project, and how the material was used. The Contractor shall also ensure that hazardous materials are utilized in a manner that will minimize the amount of hazardous waste that is generated. The Contractor shall ensure that all containers of hazardous materials have NFPA labels or their equivalent. Copies of the MSDS for hazardous materials shall be kept on site at all times and provided to the Contracting Officer at the end of the project. The Contractor shall certify that all hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste per 40 CFR 261 or TSCA wastes under 40 CFR 761.

3.3.3 Petroleum Products

Conduct the fueling and lubricating of equipment and motor vehicles in a manner that protects against spills and evaporation. All used oil generated on site shall be managed in accordance with 40 CFR 279. The Contractor shall determine if any used oil generated while on-site exhibits a characteristic of hazardous waste. In addition, used oil containing 1000 parts per million of solvents will be considered a hazardous waste and disposed of at Contractor's expense. Used oil mixed with a hazardous waste will also be considered a hazardous waste. All hazardous waste will be managed in accordance with the paragraph entitled Hazardous Waste/Debris Management of this section and shall be managed in accordance with the approved Environmental Protection Plan.

3.3.4 Spills of Oil and Hazardous Materials

Take precautions to prevent spills of oil and hazardous material. In the event of a spill, immediately notify the Contracting Officer. Spill response shall be in accordance with 40 CFR 300 and applicable State regulations.

3.4 DUST CONTROL

No air emissions permit is required under Bay Area Air Quality Management District Regulation 8, Organic Compounds, Rule 40, as long as the moisture content of all soil subject to disturbance by excavation or loading is maintained at a moisture content of 10 percent by weight or greater. Dry power

brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning non-particulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Follow the Basic Control Measures from the BAAQMD CEQA Guidelines from Table 2, Feasible Control Measures for Construction Emissions of PM₁₀:

- Water all active construction areas at least twice daily,
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard,
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites,
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets

-- End of Section --

**SECTION 01770
CLOSEOUT PROCEDURES**

PART 1 GENERAL

1.1 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-11 Closeout Submittals

As-built drawings; G

1.2 PROJECT RECORD DOCUMENTS

1.2.1 As-Built Drawings

Prepare as-built drawings showing the location of all soil excavation, the location of confirmation samples, and the depth of excavation. Boundaries of excavated areas and location of confirmation samples should be shown to an accuracy of plus or minus 1 foot. Depth of excavation should be accurate to plus or minus 2 inches. Submit drawings according to "FAC 5252.236-9310, Record Drawings." Submit drawings in CAD format.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

**SECTION 02315
EXCAVATION AND FILL**

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

| | |
|-------------|--|
| ASTM C 136 | (1996; Rev. A) Sieve Analysis of Fine and Coarse Aggregates |
| ASTM D 698 | (1991) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft (600 kN-m/m)) |
| ASTM D 1140 | (1997) Amount of Material in Soils Finer Than the No. 200 (75-Micrometer) Sieve |
| ASTM D 1556 | (1990; R 1996) Density and Unit Weight of Soil in Place by the Sand-Cone Method |
| ASTM D 2487 | (1993) Classification of Soils for Engineering Purposes (Unified Soil Classification System) |
| ASTM D 2922 | (1996) Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth) |
| ASTM D 3017 | (1996) Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth) |
| ASTM D 4318 | (1995; Rev. A) Liquid Limit, Plastic Limit, and Plasticity Index of Soils |

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| COE EM-385-1-1 | (1996) Safety and Health Requirements Manual |
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1.2 DEFINITIONS

1.2.1 Hard Materials

Weathered rock, dense consolidated deposits, or conglomerate materials which are not included in the definition of "rock" but which usually require the use of heavy excavation equipment, ripper teeth, or jack hammers for removal.

1.3 SUBMITTALS

1.3.1 SD-09 Reports

- a. Backfill Soil Tests G
- b. Results of Investigative Sampling
- c. Results of confirmation Sampling
- d. In Place Density Tests

1.3.2 SD-12 Field Test Reports

- a. Density tests

1.4 CRITERIA FOR BIDDING

Base bids on the following criteria:

- a. Surface elevations are as indicated. The estimated excavation volume of soil is 664 cubic yards before expansion.
- b. Pipes or other artificial obstructions, except those indicated, will not be encountered.
- b. Ground water elevation is 6 feet below existing surface elevation.
- e. Material character is gravel and silty sand, and asphalt and concrete paved areas as shown on drawing C1.
- f. Hard materials and rock will not be encountered.

1.5 REQUIREMENTS FOR OFF SITE SOIL

Soils brought in from off site for use as backfill shall be free of hazardous substances and shall contain less than the specified amounts of the following constituents:

- 100 parts per million (ppm) of total petroleum hydrocarbons (TPH)
- 1 ppm of the sum of benzene, toluene, ethylbenzene, and xylenes (BTEX)

Provide borrow site testing for the above from a composite sample of material from the borrow site, with at least one test from each borrow site. Material shall not be brought on site until tests have been approved by the Contracting Officer.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

Free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, and deleterious, or objectionable materials. Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location.

2.1.1 Borrow material

Obtain borrow materials required from sources outside of Government property.

PART 3 EXECUTION

3.1 SURFACE PREPARATION

3.1.1 Clearing and Grubbing

Unless indicated otherwise, remove trees, stumps, logs, shrubs, and brush within the excavation area. Remove stumps entirely. Grub out matted roots and roots over 2 inches in diameter to at least 18 inches below existing surface.

3.2 PROTECTION

3.2.1 Drainage

Provide for the collection and disposal of surface water encountered during construction. So that construction operations progress successfully, completely drain construction site during periods of construction to keep soil materials sufficiently dry.

3.2.2 Underground Utilities

Location of the existing utilities indicated in Drawings C1 and C2 is approximate. The Contractor shall physically verify the location and elevation of the existing utilities indicated prior to starting construction. The Contractor shall scan the grid squares designated in Drawing C2 as requiring PAH samples to be collected at a depth of 4 feet, with electromagnetic or sonic equipment, and mark the surface of the ground where existing underground utilities are discovered. Verify the elevations of existing underground piping, utilities, and any type of underground obstruction not indicated or specified to be removed but indicated or discovered during scanning in locations to be sampled for PAHs at a depth of 4 feet.

3.2.3 Machinery and Equipment

Movement of construction machinery and equipment over pipes during construction shall be at the Contractor's risk. Repair, or remove and provide new pipe for existing or newly installed pipe that has been displaced or damaged.

3.3 EXCAVATION

The total volume of excavation will be determined by the Navy's oversight contractor, based on soil samples collected.

3.3.1 Initial Excavation

Excavate 6 inches deep within areas identified by sampling according to Field Sampling Plan/Quality Assurance Project Plan. Submit sampling results to Navy to identify grids for excavation.

3.3.2 Additional Excavation

Excavate additional areas as directed by the Navy. Boundaries of excavated areas and location of confirmation samples should be measured to an accuracy of plus or minus 1 foot. Depth of excavation should be accurate to plus or minus 2 inches. Submit sampling results to Navy to identify grids for excavation.

3.4 FILLING AND BACKFILLING

Fill and backfill to contours, elevations, and dimensions indicated. Refill with backfill and fill material and compact to 85 percent of ASTM D 698. Compact each lift of 8 inches maximum before placing overlaying lift. Submit sampling results to Navy.

3.5 COMPACTION

Compaction is expressed as a percentage of maximum density.

3.5.1 General Site

Compact excavated and backfilled area to 85 percent of ASTM D 698.

3.6 FINISH OPERATIONS

3.6.1 Grading

Finish grades will be to return to approximate original grade, as shown in drawing C1, except where needed to take measures to control storm water runoff and erosion. Grade areas to drain water away from structures if grade is changed. Compact final finish of surface with a smooth roller.

3.7 DISPOSITION OF SURPLUS MATERIAL

Remove from Government property surplus or other soil material not required or suitable for filling or backfilling, and brush, refuse, stumps, roots, and timber.

3.8 FIELD QUALITY CONTROL

3.8.1 Sampling

Take the number and size of samples required to perform the following tests.

3.8.2 Testing

Perform the following tests for each material used. Provide additional tests for each source change.

3.8.2.1 Fill and Backfill Material Testing

Test fill and backfill material in accordance with ASTM C 136 for conformance to ASTM D 2487 gradation limits; ASTM D 1140 for material finer than the 75 micrometers No. 200 sieve; ASTM D 4318 for liquid limit and for plastic limit; ASTM D 698 for moisture density relations.

3.8.2.2 Density Tests

Test density of compacted fill in accordance with ASTM D 1556, or ASTM D 2922 and ASTM D 3017. When ASTM D 2922 and ASTM D 3017 density tests are used, verify density test results by performing an ASTM D 1556 density test at a location already ASTM D 2922 and ASTM D 3017 tested as specified herein. Perform an ASTM D 1556 density test at the start of the job, and for every 10 ASTM D 2922 and ASTM D 3017 density tests thereafter. Test each lift at randomly selected locations every 100 cubic yards of backfill placed.

3.9 DISPOSAL OF EXCAVATED SOIL

All excavated soil shall be disposed of at an appropriate off site landfill, after verification that the soil meets the landfill acceptance criteria.

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